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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,443	06/24/2002	Yasuji Hiramatsu	221014US2PCT	9253
22850	7590	06/30/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			FUQUA, SHAWNTINA T	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/070,443	HIRAMATSU ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Shawntina T. Fuqua	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16- is/are rejected.
- 7) ☒ Claim(s) 20-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5/6/04, 3/5/04, 10/2/03                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Makino (US4160897) in view of Yoshimoto et al (US5874710).

Makino discloses a ceramic heater comprising a ceramic substrate (column 2, lines 13-16), and a resistance heating element formed on the substrate (column 2, lines 22-29) wherein trimming is performed on resistance heating element (column 2, lines 45-49). Makino does not disclose a resistance divided into plural section, measuring resistivities of sections, and trimming each section based on comparison between resistivities (column 4, lines 14-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included trimming sections based on comparison between resistivities as taught by Yoshimoto et al in the heater of Makino because, trimming each section based on comparison between resistivities allows the temperature to be controlled more easily.

3. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Makino in view of Yoshimoto et al as applied to claims 16, 18 above, and further in view of JP4-249090.

Makino in view of Yoshimoto et al discloses all of the recited subject matter except trimming on a side face or surface of the resistance heating element. JP4-249090 discloses

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trimming on a side face or surface of the resistance heating element (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included trimming on a side face or surface of the resistance heating element as disclosed by JP4-249090 because, trimming on a side face or surface of the resistance heating element allows a more uniformed temperature to be achieved.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Makino in view of Yoshimoto et al as applied to claims 16, and 18 above, and further in view of Caddock (US4670734).

Makino in view of Yoshimoto et al discloses all of the recited subject matter except after forming a conductor layer on a given area of a ceramic substrate and firing it, a resistance element in a given pattern is formed by trimming a part of conductor via a laser ray. Caddock discloses after forming a conductor layer on a given area of a ceramic substrate and firing it, a resistance element in a given pattern is formed by trimming a part of conductor via a laser ray (column 2, line 57-column 3, line14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the forming the resistance element pattern by trimming via a laser of Caddock in the ceramic heater of Makino because, forming the resistance element pattern by trimming via a laser prevents voltage breakdown or arcing between portions of the pattern because the widths of the gaps between adjacent apexes are sufficiently large.

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*Allowable Subject Matter*

5. Claims 20-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

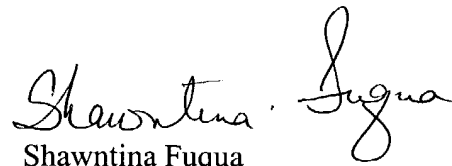
*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawntina T. Fuqua whose telephone number is (703) 305-2581. The examiner can normally be reached on Monday-Friday 8-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (703) 305-5766. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

stf  
June 28, 2004

  
Shawntina Fuqua  
Patent Examiner  
Art Unit 3742